

Insulated Panels  
UK & Ireland

Protected by



# Lo-Pitch Roof Panel Product Data Sheet



# Product Data

## Applications

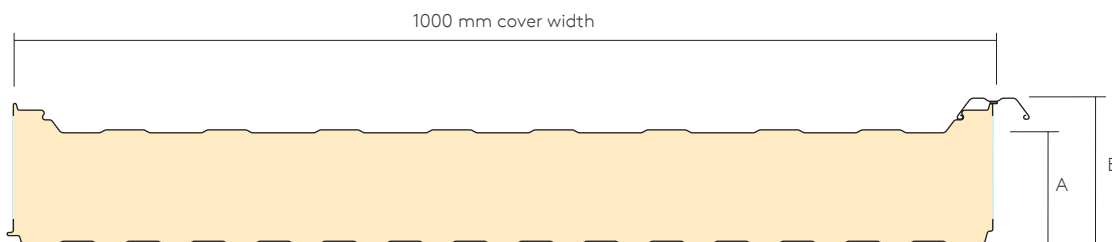
Lo-Pitch Roof Panel is a secret-fix, shallow profiled, insulated roof panel with raised side joints. This panel is ideal for all applications where the roof pitch after deflection is 1.5° or more.



## Available Lengths

Standard Lengths (m)	1.8 - 14.5
Longer Lengths (non-standard) (m)	14.5 - 29.2
Shorter Lengths (non-standard) (m)	Below 1.8

**Note:** Additional costs and transport restrictions may apply for non-standard lengths. All lengths may change for export (outside of the UK & Ireland).



## Dimensions, Weight & Thermal Performance

A - Core Thickness (mm)	45	60	80	100	115
B - Overall Thickness (mm)	80	95	115	135	150
U-Value (W/m <sup>2</sup> K)	0.46	0.31	0.25	0.21	0.18
Weight (kg/m <sup>2</sup> )*	10.0	10.6	11.3	12.1	12.7

\* Weight includes the weight of cover cap 0.47 kg/m.

The polyisocyanurate (PIR) insulation used in Lo-Pitch Roof Panels has a Thermal Conductivity ( $\lambda$ ) of 0.018W/m.K

Lo-Pitch Roof Panels have a Thermal Transmittance (U-Value), calculated using the method required by the Building Regulations Part L2 (England & Wales), Building Standards Section 6 (Scotland), Part L (Republic of Ireland) and Part F2 (Northern Ireland).

## Insulation Core

Lo-Pitch Roof Panels are manufactured with a polyisocyanurate (PIR) core.

## Certification and Testing

### Reaction to Fire

Lo-Pitch Roof Panels are classified B-s2,d0, when tested on the internal face of the product, according to the European Reaction to Fire classification system (Euroclasses) BS EN 13501-1:2018 under the certified name KS1000LP when using the following internal liners:

- CLEANsafe 15, CLEANsafe 25, CLEANsafe 55, CLEANsafe 120 and AQUAsafe 55.

Please contact Kingspan Tech-eXchange for information relating to the external face.

### Roof Applications

Lo-Pitch Roof Panels are tested to:

- BROOF(t4) to BS EN 13501-5: 2016 under the certified name KS1000LP for panel thicknesses 45 – 115mm and roof pitch of 0° - 10°.

### Insurer Approvals

Lo-Pitch Roof Panels are tested to:

- LPS 1181 Part 1: Issue 1.2 Requirements and tests for built-up cladding and sandwich panel systems for use as the external envelope of buildings certified to:
  - LPS 1181-1 Grade EXT-B under the certified name Kingspan KS1000 LP for thicknesses 45 – 115mm.

Insurer approvals are large scale testing regimes that provide objective third-party testing, which is underpinned by quarterly, bi-annual and annual factory surveillance audits (depending on the region) to verify compliance. Insurer approvals are subject to panel thickness, cover width, orientation, method of assembly, steel coating and manufacturing facility. Please contact Kingspan Tech-eXchange for further information.



## Environmental

Kingspan Insulated Panels produced in the UK are certified to BES 6001 (Framework Standard for the Responsible Sourcing of Construction Products) 'Very Good'.

All Kingspan Insulated Panels manufacturing facilities across the UK and Ireland are 100% Net Zero Energy. In addition, facilities located in Kingscourt, Holywell and Sherburn generate renewable energy onsite which contributes to that sites energy mix.

Kingspan Insulated Panels procure steel that is made from 15 – 25% recycled content. Kingspan insulated panels directly contribute to BREEAM® / LEED® credits.

## Air Leakage

An air leakage rate of 3m<sup>3</sup>/hr/m<sup>2</sup> at 50Pa or less can be achieved when using Kingspan insulated roof and wall panels.

For information on detailing required to achieve lower air leakage rates please contact Kingspan Tech-eXchange.

## Acoustic

### Sound Reduction Index (SRI)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
SRI (dB)	19	19	19	22	19	35	39	46

Lo-Pitch Roof Panels have a single figure weighted sound reduction  $R_w = 24$ dB. Results are based on panels of similar profile and core material.

## Materials

### Substrate

Metallic protected steel to BS EN 10346: 2015.

Please contact Kingspan Tech-eXchange for information on other substrates.

### Coatings – External Weather Sheet

- Kingspan XL Forté: Consists of a multi-layer organic coating, embossed with a traditional leather-grain finish.
- Kingspan Spectrum: Consists of a coated semi-gloss finish with slight granular effect.

For Reaction to Fire performance of external weather sheets please contact Kingspan Tech-eXchange.

### Coatings – Internal Liner Sheet

- Kingspan CLEANsafe 15: The coating has been developed for use as the internal lining of insulated panels. Standard colour is "bright white" with an easily cleaned surface.
- Kingspan CLEANsafe 120: The coating has been developed for use as the internal lining of insulated panels where a high level of cleanliness and hygiene is required, and the panels are to be cleaned down on a regular basis.
- Kingspan AQUAsafe 55: The coating has been developed for use as the internal lining of insulated panels to swimming pool internal environments.

For reaction to fire performance of panels with above internal liners please see Certification and Testing section.

# Product Data

## Panel End Cut Back

Eaves Cut Back	75mm
End Lap	75mm

For further information in relation to end laps please contact Kingspan Tech-eXchange.

## Product Tolerances

Cut to Length	± 5mm
Cover Width	± 2mm
Thickness (Core ≤ 100mm)	± 2mm
Thickness (Core > 100mm)	± 2%
End Squareness	± 3mm

## Handing

Lo-Pitch Roof Panels can be manufactured in both left to right handed (LH) and right to left handed (RH).

## Cover Caps

Material	To suit weather sheet
Maximum Length (m)	12.0

**Note:** Available in plain ended for eaves to eaves in one length or joggle ended for when the cover cap is being end lapped due to multiple lengths up the slope.

## Quality & Durability

Lo-Pitch Roof Panels are manufactured from the highest quality materials, using state of the art production equipment to rigorous quality control standards, complying with BS EN ISO 9001 standard, ensuring long term reliability and service life. The panels are also being manufactured under Environmental Management System Certification BS EN ISO 14001, Energy Management System Certification BS EN ISO 50001 and Occupational Health and Safety Certification BS EN ISO 45001. Lo-Pitch Roof Panels are CE marked to BS EN 14509: 2013.



## Handling

The Lo-Pitch KS1000 LP insulated roof panel can be manufactured in both left to right handed (LH) and right to left handed (RH).

## Cover Caps

## Seals

Factory applied side and end lap weather seals.

## Quality & Durability

Lo-Pitch KS1000 LP insulated roof panels are manufactured from the highest quality materials, using state of the art

Core Thickness (mm)	45	60	80	100	115
No. of Panels per Pack	16	14	12	9	8

**Note:** Applies to UK pack sizes. Please contact Kingspan Tech-eXchange for export information.

production equipment to rigorous quality control standards, complying with BS EN ISO 9001 Standard, ensuring long term reliability and service life. The panels are also manufactured under Environmental Management System Certification BS EN ISO 14001. Compliant to BS OHSAS 18001 Occupational Health and Safety. The Lo-Pitch KS1000 LP roof panels are CE marked to BS EN 14509: 2013.

## Warranty

Kingspan Panel Warranty covering the following subject to project specific information:

- 25 year thermal performance warranty;
- 25 year structural performance warranty; and
- Up to 40 year external coating warranty (subject to project specific information).



# Product Data

## Load / Span Tables

### Structural Tables

External sheet 0.5mm (steel), internal sheet 0.4mm (steel).

Unfactored load / span tables (to be compared against calculated design wind load values unfactored).

### Single Span

Core Thickness (mm)	Load Type	Span (m)										
		Uniformly distributed imposed load (kN/m <sup>2</sup> )										
		1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0
45	Pressure	3.60	3.02	2.58	2.22	1.76	1.35	1.04	0.81	0.62	0.48	0.35
	Suction	4.09	3.47	3.00	2.62	3.21	2.86	2.55	2.16	1.84	1.59	1.37
60	Pressure	4.69	4.05	3.54	3.10	2.59	2.06	1.65	1.33	1.07	0.87	0.70
	Suction	5.33	4.64	4.09	3.62	3.21	2.86	2.55	2.16	1.84	1.59	1.37
80	Pressure	6.19	5.47	4.87	4.33	3.77	3.08	2.54	2.10	1.75	1.46	1.22
	Suction	7.01	6.24	5.59	5.00	4.48	4.02	3.39	2.85	2.43	2.10	2.28
100	Pressure	7.71	6.92	6.22	5.59	4.99	4.15	3.47	2.93	2.48	2.11	1.80
	Suction	8.73	7.88	7.11	6.42	5.79	5.11	4.22	3.54	3.02	2.61	2.28
115	Pressure	8.87	8.01	7.25	6.54	5.90	4.96	4.19	3.56	3.05	2.62	2.25
	Suction	10.04	9.11	8.08	7.08	6.30	5.68	4.84	4.07	3.47	3.00	2.62

### Double Span

Core Thickness (mm)	Load Type	Span (m)										
		Uniformly distributed imposed load (kN/m <sup>2</sup> )										
		1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0
45	Pressure	2.19	1.57	1.20	0.95	0.77	0.64	0.54	0.47	0.40	0.35	0.31
	Suction	2.74	2.08	1.67	1.39	1.19	1.04	0.92	0.83	0.76	0.70	0.65
60	Pressure	2.47	1.80	1.37	1.09	0.89	0.74	0.63	0.55	0.48	0.42	0.37
	Suction	3.07	2.35	1.89	1.58	1.36	1.19	1.06	0.96	0.87	0.81	0.75
80	Pressure	2.82	2.08	1.60	1.28	1.05	0.88	0.75	0.64	0.56	0.50	0.44
	Suction	3.48	2.69	2.18	1.82	1.56	1.37	1.22	1.10	1.01	0.93	0.86
100	Pressure	3.15	2.34	1.8	1.45	1.19	1.00	0.85	0.73	0.64	0.56	0.50
	Suction	3.86	3.00	2.44	2.05	1.76	1.54	1.38	1.24	1.14	1.05	0.97
115	Pressure	3.38	2.52	1.96	1.57	1.29	1.08	0.92	0.79	0.69	0.61	0.54
	Suction	4.13	3.23	2.63	2.21	1.90	1.67	1.49	1.34	1.23	1.13	1.05

1 Values have been calculated using the method described in BS EN 14509: 2013, for medium coloured panels.

2 The following deflection limits have been used:

- Pressure loading  $l/200$ .
- Suction loading  $l/150$ .

3 All panel thicknesses have been calculated with a minimum support width of 50mm. Larger support widths are possible.

4 The actual wind suction resisted by the panel is dependent upon the number of fasteners and the material of the supporting element.

5 The fastener calculation should be carried out in accordance with the appropriate standards.

6 For intermediate values linear interpolation may be used.

7 The allowable steelwork tolerance between bearing planes of adjacent supports is +/- 5mm.

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# Contact Details

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For the product offering in other markets please contact your local sales representative or visit [www.kingspanpanels.com](http://www.kingspanpanels.com)

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